



## **Global, Regional, and Megacity Trends in the Highest Temperature of the Year**

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Trends in short-lived high temperature extremes record a different dimension of change than the extensively studied annual and seasonal mean daily temperatures. They also have important socioeconomic, environmental and human health implications. Here, we present analysis of the highest temperature of the year for approximately 9,000 stations globally, focusing on quantifying spatially-explicit exceedance probabilities during the recent 50- and 30-year periods. A global increase of  $0.19^{\circ}\text{C}$  per decade during the past 50 years (through 2015) accelerated to  $0.25^{\circ}\text{C}$  per decade during the last 30 years, a faster increase than in the mean annual temperature. Strong positive 30-year trends are detected in large regions of Eurasia and Australia with rates higher than  $0.60^{\circ}\text{C}$  per decade. In cities with more than 5 million inhabitants, where most heat-related fatalities occur, the average change is  $0.33^{\circ}\text{C}$  per decade, while some east Asia cities, Paris, Moscow and Houston have experienced changes higher than  $0.60^{\circ}\text{C}$  per decade.

### References

Papalexiou, S. M., AghaKouchak, A., Trenberth, K. E., & Foufoula-Georgiou, E. (2018). Global, Regional, and Megacity Trends in the Highest Temperature of the Year: Diagnostics and Evidence for Accelerating Trends, *Earth's Future*, 5. <https://doi.org/10.1002/2017EF000709>